

3 1761 11631364 4

CAI
YL16
-1994
B366+

Government
Publications

Enterprise-based training
in Canada

CAI
YL 16
- 1994
B366

Background Paper

ENTERPRISE-BASED TRAINING IN CANADA

Kevin B. Kerr
Economics Division

December 1993



Library of
Parliament
Bibliothèque
du Parlement

**Research
Branch**

The Research Branch of the Library of Parliament works exclusively for Parliament, conducting research and providing information for Committees and Members of the Senate and the House of Commons. This service is extended without partisan bias in such forms as Reports, Background Papers and Issue Reviews. Research Officers in the Branch are also available for personal consultation in their respective fields of expertise.

©Minister of Supply and Services Canada 1994
Available in Canada through
your local bookseller
or by mail from
Canada Communication Group -- Publishing
Ottawa, Canada K1A 0S9

Catalogue No. YM32-2/366E
ISBN 0-660-15640-7

CE DOCUMENT EST AUSSI
PUBLIÉ EN FRANÇAIS

AVX-3211

TABLE OF CONTENTS

	Page
INTRODUCTION	1
ESTIMATES OF ENTERPRISE-BASED TRAINING	2
EVIDENCE OF SUB-OPTIMAL TRAINING	5
A. Skill Shortages	5
B. International Comparisons	6
DISINCENTIVES TO TRAINING	9
A. Assignment of Costs	10
B. Institutional Arrangements	11
C. Uncertainty	13
FEDERAL POLICIES AND PROGRAMS	14
CONCLUSION	16
BIBLIOGRAPHY	17



Digitized by the Internet Archive
in 2023 with funding from
University of Toronto

<https://archive.org/details/31761116313644>



CANADA

LIBRARY OF PARLIAMENT
BIBLIOTHÈQUE DU PARLEMENT

ENTERPRISE-BASED TRAINING IN CANADA

INTRODUCTION

As investments in human capital partly determine the productive capacity of a country's labour force, it is not surprising to find this issue to the fore in discussions on Canadian competitiveness and prosperity. Of particular interest, and the subject of this paper, are investments made by firms and their workers in human capital, hereafter referred to as enterprise-based training (ET). These investments may impart skills used exclusively by the firm in which the training takes place (specific training) or skills demanded by many firms (general training). Training may take place on the job, in an institutional setting or with some combination of both.

Generally accepted, though not particularly well founded, is the view that firms and workers in Canada underinvest in ET.⁽¹⁾ While some data suggest that Canada's private sector devotes proportionately less GDP to investments in training than does that of other OECD countries, this type of comparison fails to take into account other ways of investing in human capital, such as post-secondary education. Until now, Canada's skill needs have been supplied largely from a rapidly growing labour force (including immigrants) coupled with substantial public sector investments in education and training. It is feared, however, that slower labour force growth, combined with more rapid changes in skill requirements, may render this approach

(1) The recent policy to stimulate enterprise-based training seems to be rooted in the Labour Force Development Strategy. In April 1989, the government released a policy paper stating that it intended "to stimulate an additional private sector training effort of \$1.5 billion a year by 1994" so as to raise the level of private sector training to that of the United States (Employment and Immigration Canada, *Success in the Works: A Policy Paper*, April 1989, p. 5). This objective was broadened in the Speech from the Throne on 13 May 1991, when the government announced its intention to quadruple the training provided by employers to their employees by the year 2000.

less effective in the years to come. As many labour market observers expect greater pressure to be exerted on the existing workforce to supply our future skill needs, failure to develop enterprise-based training in Canada more fully may dampen our economic potential. It is in this context that the Steering Group on Prosperity recently recommended that, within two years, all employees receive at least one week of training each year (apparently irrespective of the training needs of individual firms and workers).⁽²⁾

In discussing the current state of ET in Canada, this paper reviews recent survey results pertaining to the incidence of enterprise-based training, the scant evidence of sub-optimal levels of skill acquisition activities in the workplace, possible reasons for sub-optimal ET and federal initiatives to stimulate this type of training.

ESTIMATES OF ENTERPRISE-BASED TRAINING

The most recent comprehensive survey on ET in Canada was conducted in 1991 by the Canadian Labour Market and Productivity Centre.⁽³⁾ The results of this survey are based on the responses of private sector firms, excluding firms with fewer than two employees and firms in the health, education and public administration sectors. As indicated by the data presented in Table 1, the survey found that some 70% of private sector firms provided some structured training (i.e., monitored training activities with a predefined objective and a specified content), while 76% provided some unstructured training. Overall, 36% of employees in private sector firms received some structured training during the reference period. This estimate is significantly different from the one emerging from a recent survey conducted by Statistics Canada; according to this survey, 13% of the employed population aged 17 years and over (1.6 million individuals) received employer-sponsored training in 1990.⁽⁴⁾ Although this is not captured by the data shown in Table 1, proportionately more large firms than small firms engaged in structured training, a finding that is consistent with those of other ET surveys.

-
- (2) Steering Group on Prosperity, *Inventing Our Future: An Action Plan for Canada's Prosperity*, October 1992, p. 45.
 - (3) A brief summary of national surveys on ET conducted during the last decade is presented in the appendix.
 - (4) Robert Couillard, *The 1990 Adult Education and Training Survey*, Employment and Immigration Canada and Statistics Canada, 1993, p. 31.

It is estimated that approximately 3.4 million employees (36% of the private sector workforce), received some structured training during the reference period. Overall, the private sector provided an estimated 133.6 million hours of structured training or 14 hours of training per employee; the average duration of training was estimated to be 39 hours. Of the sectors, the retail industry exhibited the highest incidence of structured training, while the transportation industry exhibited the lowest. Given the relatively high volume of training in the retail industry, it is not surprising to find that workers employed in sales-related occupations registered the highest incidence of structured training, some eight percentage points above the average for all workers. The probability of receiving structured training was found to be roughly equal for men and women.

It would appear that the most common type of ET is firm-specific; some 61% of training firms provided orientation training for new employees and this type of training accounted for the largest share (20%) of total training hours. Although the largest proportion of employees (28%) received health and safety training, this type of training accounted only for 11% of total training hours. Professional training was found to be most intensive, with the average training spell lasting 38 hours or approximately one week.

Despite the high incidence of firms that provide training, only 19% reported that they had a specific training budget and only 16% of firms reported having a training plan. Approximately 75% of training firms financed training internally, while 21% reported some external funding, of which the most frequently cited form was government wage subsidies. An overwhelming majority of firms (70%) indicated that they had satisfied their training needs during the reporting period.⁽⁵⁾ It should be noted, however, that this was true of only about one-third of firms with 200 or more employees. Of the firms that were unable to satisfy their training needs, a majority gave high costs, a lack of funds and not enough time as major reasons. Computer-related training was cited most often (26%) by firms that wanted to do additional training.

(5) A related result based on Statistics Canada's 1991 Adult Education and Training Survey (not yet published) also suggests that an overwhelming majority of employees receive the training they need. According to this survey, only 13% of all employees reported that they needed more career-related education and training than they received: Constantine Kapsalis, "Employee Training in Canada: Reassessing the Evidence," *Canadian Business Economics*, Summer 1993, p. 7.

TABLE 1
HIGHLIGHTS FROM THE NATIONAL TRAINING SURVEY (1991)

Per cent of private sector firms providing:	
- structured training	70%
- unstructured training	76%
Per cent of employees receiving structured training by firm size:	
- 2-19 employees	32%
- 20-99 employees	35%
- 100-199 employees	35%
- 200-499 employees	38%
- 500+ employees	39%
All firms	36%
Per cent of employees receiving structured training by sector:	
- transportation	23%
- construction	28%
- wholesale	30%
- manufacturing	31%
- mining	31%
- finance	34%
- services	35%
- agriculture/forestry/fishing	47%
- retail	54%
Per cent of employees receiving structured training by broad occupational category:	
- clerical	31%
- technical/trades	32%
- professional	35%
- supervisors	38%
- sales	44%
Average hours of training by type(1):	
- environmental	6 (2%)
- health and safety	8 (11%)
- non-office equipment	18 (6%)
- sales	21 (10%)
- orientation	22 (20%)
- computers	23 (12%)
- managerial	27 (11%)
- literacy	30 (2%)
- professional	38 (9%)
- other	- (17%)
Distribution of training expenditures by type of training cost:	
- training materials	5%
- overhead	5%
- other	4%
- travel/living	7%
- instructor fees	14%
- wages of employee providing training	20%
- trainee wages	45%

(1) Apprenticeship training is excluded. Figures in parentheses represent the share of total training hours.

Source: Canadian Labour Market and Productivity Centre, 1991 National Training Survey, February 1993.

Of the firms that provided information on training expenditures, it is estimated that \$3.6 billion, or 0.53% of GDP in 1991, was spent on structured training. These expenditures, roughly twice those reported in Statistics Canada's 1987 Human Resource Training and Development Survey, are likely understated since a large proportion of firms failed to report usable information on training costs (no attempt was made to extrapolate total expenditures).

EVIDENCE OF SUB-OPTIMAL TRAINING

As we will see later, the potential for market failure in ET abounds. Nevertheless, it is extremely difficult, if not impossible, to ascertain if enterprise-based training activities are sub-optimal (i.e., if the net marginal private or social benefits of enterprise-based training are positive). Two factors - skill shortages and the purported lower incidence of enterprise-based training activities in Canada than in other countries - may suggest, but do not substantiate, the existence of underinvestment in enterprise-based training.⁽⁶⁾

A. Skill Shortages

Despite significant levels of surplus labour, some firms report difficulty in employing qualified workers. For example, close to 60% of firms responding to a recent survey experienced difficulties hiring supervisory, management, professional, technical and skilled trades workers, while an even greater proportion of firms expected these hiring difficulties to worsen over the next five years.⁽⁷⁾ In addition, Employment and Immigration Canada recently projected a decline in the skill index (i.e. the ratio of skills in supply to skills in demand) to below one by the year 2000, thus suggesting a general skilled labour shortage by the end of the decade.⁽⁸⁾

(6) A more direct approach would be to examine estimates of the return to ET. If these returns exceeded those realized on other investments, we could deduce that investments in ET are sub-optimal. Unfortunately, this information is not available. Though dated, it should be noted that the rate of return to training under the Canada Manpower Industrial Training Program was estimated to be around 30% for employed and unemployed trainees and 10% for trainees with special needs. The former compares favourably to an estimated rate of return to post-secondary education of between 5-10% (Wayne Simpson and David Stambrook, "Employer-Based Training Policy in Canada," November 1989, p. 10-11; mimeo).

(7) Towers Perrin and the Hudson Institute of Canada, "Workforce 2000," June 1991, p. 4-5.

(8) Employment and Immigration Canada, *Success in the Works: A Profile of Canada's Emerging Workforce*, 1989, p. 24.

While skill shortages may indicate under-investment in ET, they more likely depict a time lag in the adjustment process between the demand for, and supply of, skills. When an occupation experiences excess demand (i.e., demand exceeds supply), potential earnings in that occupation should rise above those of occupations where there is no excess demand. Although additional workers are attracted by the higher relative wage, the investment in human capital takes time; skills are not acquired instantaneously and temporary skill shortages are part of the normal adjustment process in the labour market. The existence of chronic shortages, on the other hand, suggests rigidities in the adjustment process, which could contribute to sub-optimal investments in ET.

B. International Comparisons

Given the degree of homogeneity in many OECD economies, particularly with respect to labour force characteristics and production technologies, one might expect similarities in ET investment activity. The data in Tables 2 and 3 do not support this expectation; they depict a considerable degree of variability across countries. In the case of ET expenditures expressed as a per cent of GDP, a measure to which numerous references have been made, ET investments in Canada fall well below those of some of our major competitors. These data suggest that the United Kingdom, Germany (FDR), Japan, Australia, the United States and France spend respectively about nine, eight, six, four, three and two times more on ET than Canada. If we use the most recent estimate of ET expenditures in Canada, our position is comparable to that of France and the United States.

Despite the magnitude of the relative differences between some of the countries included in the table, it should be borne in mind that these data differ in terms of reference periods, types of training and the costs reported. For example, trainees' wages are included in estimated ET expenditures for some countries, but not for others.

TABLE 2
ET EXPENDITURES FOR SELECTED COUNTRIES(1)

	Expenditures	Per cent of GDP
Australia (1983)	\$1.6 billion	0.90
Canada (1987)	\$1.4 billion	0.25
(1991)(2)	(\$3.6 billion)	(0.53)
France (1985)	FF22.4 billion	0.48
Germany (FDR) (1982)	DM31.3 billion	1.96
Japan (1984)	¥4.2 trillion	1.40
United Kingdom (1987)	£9.0 billion	2.17
United States (1987)	\$30.0 billion	0.66

(1) These data are attributed to eight separate sources.

(2) The data in parentheses refer to the most recent national estimate of expenditures on structured ET (1991 National Training Survey).

Source: Wayne Simpson and David Stambrook, "Employer-based Training Policy in Canada," prepared for Employment and Immigration Canada, draft, November 1989, Table 2; and Canadian Labour Market and Productivity Centre, *1991 National Training Survey*, February 1993.

According to the data presented in Table 3, a comparison of ET activities in OECD countries based on the incidence of training among employees proves more favourable to Canada than a comparison based on relative ET expenditures. Estimates based on enterprise surveys suggest the incidence of training among employees in Canada is comparable to that in France and the Netherlands, but somewhat lower than that in Japan and Norway. According to estimates based on labour force surveys, the incidence of ET in Canada is higher than or comparable to that in Finland, France, Germany, Great Britain, Ireland, Spain, Sweden and the United States. ET comparisons based on these data, however, are also suspect, since the surveys generating this information differ with respect to reference periods, coverage and the definitions of training used.

TABLE 3
INCIDENCE OF TRAINING AMONG EMPLOYEES (per cent)

	Australia	Canada	Finland	France	Germany (formerly West Germany)	Great Britain	Ireland	Japan	Netherlands	Norway	Spain	Sweden	United States
A	79.0	-	34.4	4.6	12.7	14.4	7.8	-	-	-	2.4	25.4	35.8
B	-	27.0(36)	-	26.6(29.2)	-	-	-	36.7(75.3)	25.0	33.1	-	-	-

Notes to Row A: Data were collected from labour force surveys. The incidence of training is calculated as the number of employed persons (as defined in each country's survey) who said that they received some kind of training during the reference period expressed as a per cent of the total employed labour force. All training activities, though not necessarily financed fully by employers, are included with respect to Australia (reference period was a twelve-month period prior to the survey which was conducted in 1989), Germany (reference period was four weeks prior to April 1989), Great Britain (reference period was Spring 1989), Ireland (reference period was April 1989), Spain (reference period was a four-week period in the second quarter of 1990), Sweden (reference period was January-May 1987) and the United States (reference period was any time with respect to current employer as of January 1983). In the case of Finland (reference period was September to December 1987), training only included professional and/or trade union training within the framework of a structured course, partly or fully paid for by the employer.

Notes to Row B: The data for Canada are based on an enterprise survey covering the period November 1986 to October 1987. Training refers to formal training programs directly provided or supported by private sector firms. Incidence refers to the number of formal training program participants (could involve double counting) expressed as a per cent to total paid employment. The figure in parentheses refers to 1991 and is the latest national estimate available. In the case of France data are administrative data. Incidence refers to the number of employees in private, semi-public and co-operative firms with ten or more employees expressed as a per cent of the total number of permanent employees as of the end of 1988 (training does not include activities which occurred in the context of training insurance funds - Fonds d'Assurance Formation). The figure in parentheses refers to training conducted in the context of training insurance funds. Data for Japan were collected through an enterprise-based survey of private sector firms with 30 or more employees in 1989. Incidence refers to the proportion of employees who received some off-the-job training with their current employer at any time. The figure in parentheses refers to the proportion of employees who received some off-the-job training with their current employer at any time. In the case of the Netherlands, data were generated from an enterprise-based survey (1986) of private sector firms with five or more workers. On-the-job training, apprenticeships and schooling were not included in the survey. Norway's data were collected through an enterprise/employees survey and refer to formal training activities which took place in 1988 or 1989. Apprenticeship training and on-the-job training were excluded from the survey.

Source: OECD, *Employment Outlook*, Chapter 5, July 1991; and Canadian Labour Market and Productivity Centre, *1991 National Training Survey*, February 1993.

Even if the data pertaining to the incidence of, or expenditures on, ET were comparable across countries, this type of analysis, while instructive, is inadequate since it fails to capture the effects of alternative avenues for investing in human capital. Countries such as Canada, which rely heavily on formal schooling to impart vocational skills to workers, will naturally engage in relatively less ET activity than countries whose vocational training systems emphasize on-the-job training. This is shown by contrasting Canada and Germany, which relies largely on apprenticeship training as a means of skill acquisition. It is estimated that some 1.1% (roughly 129,000 apprentices) of Canada's employed labour force were enrolled in apprenticeship training in 1987, compared to approximately 7.1% (approximately 1.8 million apprentices) in Germany in the same year.⁽⁹⁾ On the other hand, the incidence of post-secondary education in Canada in 1988 was estimated to be 76%, compared to 26% in Germany.⁽¹⁰⁾ Surely, institutional training biases of this sort skew comparisons of ET activity across countries and therefore must be taken into account.

DISINCENTIVES TO TRAINING

In theory, workers and firms invest in ET up to the point where the incremental costs of, and returns to, training are equal. Under competitive conditions, these decisions yield an optimal amount of training. In the case of general ET (i.e., training that imparts skills demanded by many firms), trainees bear the costs of, and realize the returns to, training. Since the return to general ET is fully captured via higher wages, there is no incentive for firms to bear the cost of training. The cost of general training is usually recovered by paying trainees wages below their productive value while they are training. This is common practice in firms providing apprenticeship training, for example. In the case of specific ET (i.e., training that

(9) Canadian Labour Market and Productivity Centre, *Report of the CLMPC Task Force on the Labour Force Development Strategy*, 1990, p. 177.

(10) The incidence of post-secondary education was measured by the ratio of post-secondary full-time equivalent enrolment to the population in the theoretical age range for such programs. The age range for university was taken to be 18-24 years of age and 18-20 for non-university post-secondary education: Constantine Kapsalis, "Employee Training in Canada: Reassessing the Evidence," *Canadian Business Economics*, Summer 1993, Table 2, p. 6.

imparts skills demanded by a single firm), firms and trainees both bear a portion of the costs of training, since both share in the return. Trainees receive a higher wage, though not equal to their higher productive value, and firms recoup the rest. Irrespective of the type of training provided, firms are constrained if they attempt to profit from the provision of training. In the context of general ET, workers who receive post-training wages below the productive value of their skills will search for firms paying higher wages. Firms refusing to share the return to specific ET could lose their investment altogether if workers quit after training.

A more realistic depiction of ET probably involves the simultaneous provision/acquisition of both general and firm-specific skills. A disincentive to train could arise if firms find themselves unable to distinguish between general and firm-specific skills conferred by training and thus cannot assign training costs properly. Other factors, such as legislated or negotiated rates of pay while training, training contracts with seniority provisions, untrainable workers and, of course, uncertainty regarding the returns to training could also serve to constrain investments in ET.

A. Assignment of Costs

If firms are unable to assign the costs of ET appropriately, the level of skill acquisition activities within firms will likely be sub-optimal. This problem is often raised in the context of "poaching"; in this situation, firms paying market rates acquire workers trained by other firms that have attempted to transfer the cost of training to them through below-market, post-training wages. Poaching would not represent a problem if firms were able to assign the costs of training so as to avoid any training-related costs if workers quit.

Employers may not be able to assign the costs of training appropriately during the training period because training wages are too high. Minimum wage rates (in the absence of exemptions while training) and other regulated rates of pay, including those established under collective agreements, can all contribute to wage rates that exceed the productive value of trainees and/or that do not sufficiently compensate for training costs. Regulated wage rates for apprentices in Ontario, for example, must be at least 40%, 50%, 60%, 70% and 80% of average wages paid to journeymen during the first, second, third fourth and fifth stages of training

respectively.⁽¹¹⁾ The extent to which these and other regulated wage rates compensate employers for the cost of training is uncertain and, in some instances, may well exceed the rates of pay that firms are willing to provide during periods of training. Some firms may try to recoup these costs by paying below-market wage rates during the post-training period; as noted above, however, they run the risk of losing part of their investment because trained workers have an incentive to seek out firms willing to pay the going wage.

The extent to which firms are unable to assign the costs of ET appropriately is uncertain, though the problem does seem to exist. For example, over 41% of firms in a recent survey of industry training in Ontario reported poaching of skilled workers as a serious problem.⁽¹²⁾ According to the results of two recent national surveys on ET, a large majority of firms that were unable to meet their training needs cited "a lack of funds" as the primary reason.⁽¹³⁾ If this refers to general ET it demonstrates an absence of adequate cost-sharing arrangements and may suggest that recipients of ET receive too high a wage while training and quit before firms are able to recoup, or adequately share, the cost of training during the post-training period.

B. Institutional Arrangements

While institutional factors, such as legislation, regulations and/or collective agreements, can contribute to excessive training wages, as noted above they can also influence the training decisions of firms and workers by stipulating who receives training and how trainees are to be trained. An examination of on-the-job training provisions in major collective agreements (i.e., those involving 500 or more workers) indicates that trainees are sometimes selected on the basis of seniority.⁽¹⁴⁾ This provision tends to reduce the payback period,

(11) R.R.O. 1990, *General Regulation under the Trades Qualification Act*, s.10(1).

(12) Ontario Premier's Council, *People and Skills in the New Global Economy*, 1990, p. 95.

(13) Edith Rechnitzer, *Human Resource Training and Development Survey Results, 1987*, Statistics Canada, 1990, p. 17; and Canadian Labour Market and Productivity Centre, *1991 National Training Survey*, 1993, p. 55.

(14) Labour Canada, *Job Training Provisions in Major Collective Agreements*, 1989, p. 8 and 14.

rendering investments in ET uneconomic. Workers with the greatest amount of seniority are usually the oldest. These workers are generally unwilling to accept a reduced wage while training, as the period of time over which the training investment is recouped is usually too short. In the case of specific ET, firms are reluctant to train older workers for the same reason.

Provincial legislation, and in some instances collective agreements, govern many facets of ET, especially in the case of apprenticeship training. ET-related legislation exerts a direct influence on the provision of, and access to, training and controls its content, duration and eligibility requirements. Such legislation can adversely affect the interprovincial mobility of trainees during and after training. Educational requirements for entry into an apprenticeship program can vary by as much as three years: in New Brunswick, for example, one must possess a grade nine education to apprentice as a construction electrician, while a grade 12 education is required in British Columbia and the Yukon.⁽¹⁵⁾ The duration of training can also vary significantly and thereby influence the cost of training, since for a given trade this is undoubtedly greater in provinces with longer periods of training. The apprenticeship program for a heavy duty equipment operator in Ontario, for example, lasts for five years at 1,800 hours per year with 26 weeks of institutional training, while in Quebec it lasts for three years at 2,000 hours per year with no institutional training.⁽¹⁶⁾ Firms providing apprenticeship training are also required to maintain specific ratios of apprentices to journeymen, thus making training costs in provinces with low ratios higher than in provinces with high ones. A shortage of journeymen could also constrain training activities; it is instructive to note that approximately 30% of firms (with 100 or more workers) responding to a recent ET survey cited a lack of skilled instructors as the second most prominent reason for not meeting all of their training needs.⁽¹⁷⁾

(15) Employment and Immigration Canada, *Ellis Chart: A Comparative Chart of Apprenticeship Training Programs*, 1990, p. 113.

(16) *Ibid.*, p. 145.

(17) Rechnitzer (1990), p. 17.

C. Uncertainty

Uncertainty can also generate underinvestment in ET. In the case of general ET, workers are usually unable to secure loans to supplement lower training wages since financial institutions will not accept future earnings as collateral. This constraint could prevent individuals from undertaking ET investments if the costs of training are too high because of foregone income during training. Even if workers do not require training loans, they face a considerable amount of uncertainty regarding the level and duration of earnings throughout the post-training period. Cyclical, structural or other unanticipated factors that shorten the pay-back period all raise the level of risk associated with investments in ET.⁽¹⁸⁾ This makes it difficult to determine the optimal amount of training and may explain, in part, an apprenticeship drop-out rate of more than 40%.⁽¹⁹⁾ As little difference was observed between the average hourly earnings of completers and drop-outs, we should not be surprised to find that the optimal amount of training for many apprentices seems to be achieved before journeyman status. This drop-out rate may also indicate that apprenticeship training programs are too long; most marketable skills appear to be acquired prior to the end of formal training.

Uncertainty can also lead to underinvestments by firms in specific ET; however, this problem may not be as significant for large firms as for small ones. The ability of larger firms to absorb these risks may be one reason why we observe a strong positive relationship between firm size and the incidence of ET. Another factor may involve economies of scale in the production of training (i.e. per unit training costs decline as the volume of training rises).

(18) While unemployment insurance can reduce the uncertainty associated with future earnings, it cannot eliminate uncertainty entirely. Evidence suggests that investments in human capital are augmented by the existence of unemployment, but this relationship is dampened as the degree of insurability rises. As the extent and duration of wage replacement rises so does the duration of unemployment. And longer periods of unemployment reduce the return on human capital investments: Eleanor Brown and Howard Kaufold, "Human Capital Accumulation and the Optimal Level of Unemployment Insurance Provision," *Journal of Labour Economics*, Vol. 6, No. 4, 1988, p. 493-514.

(19) Earnest B. Akyeampong, "Apprentices: Graduate and Drop-out Labour Market Performances," *Perspectives*, Statistics Canada, Spring 1991, p. 8.

FEDERAL POLICIES AND PROGRAMS

Under ideal conditions (i.e. perfect competition, complete access to capital and no externalities or third-party effects), there is no need for government intervention in the provision of ET. Private decisions would produce a socially optimal level of enterprise-based training. Assuming, however, that ideal conditions do not exist, the government has deemed it necessary to develop policies and programs to stimulate investments in general ET. Prior to the 1960s, federal involvement in the provision of ET was virtually non-existent. Since then, such involvement has increased substantially, possibly displacing some private sector training activity along the way.

Current federal initiatives designed to encourage general ET involve varying degrees of intervention and are primarily delivered through the Labour Market Adjustment Program (LMAP). LMAP comprises a number of options, including Human Resource Planning, Workplace-based Training, Training Trust Funds and Training Enhancement Assistance. **Human Resource Planning** provides technical and financial assistance to individual firms or industrial sectors to identify their training needs, to establish skill standards and to train their workers. **Workplace-based Training** is designed to help firms meet their skill needs, retrain workers whose skills have become redundant and encourage the training of members of designated groups. Except for training members of a target group, subsidies are primarily directed at off-the-job training.⁽²⁰⁾ **Training Trust Funds** are intended to encourage employees (employee associations) and employers to establish a financing mechanism to underwrite general training. Public contributions are cost-shared and each fund is expected to operate on its own after three years. It is interesting to note that, while this option presumably

(20) The emphasis on off-the-job training is somewhat surprising, given the questionable performance of institutional training purchases. A evaluation of the former Skill Investment Program found few significant labour market differences (e.g. employability, job retention, wages, etc.) between recipients of direct and indirect training purchases and the reference group: Ekos Research Associates Inc., *Skill Investment Program Evaluation: Final Report*, prepared for Employment and Immigration Canada, February 1992, p. 78-83. In the case of the Skill Shortages Program, institutional training purchases seemed to be more beneficial to participants; though it should be noted that training was in designated, high demand occupations: Abt Associates of Canada, *Evaluation of the Skill Shortages Program*, prepared for Employment and Immigration Canada, September 1991, p. 60-74.

seeks to alleviate the financing problems created by imperfect capital markets, Training Trust Funds may not be used to augment wages during training. **Training Enhancement Assistance** is a cost-shared initiative designed to fund short-term activities that promote the development of a "training culture" in the private sector. In 1992-93, approximately \$105 million (or 8.0% of total non UI-related expenditures on Employment and Immigration Canada's Employment Activity) was expended on LMAP.⁽²¹⁾

Despite existing federal initiatives to expand enterprise-based training, calls for additional public sector involvement persist. For instance, in the report of the CLMPC Task Force on Approaches to Human Resource Planning, both business and labour recommended more government intervention in this area. Business recommended the introduction of tax-based incentives (i.e., training tax credits, voluntary employer/employee tax deductible contributions to Individual Training Accounts, tax sheltered Registered Skill Development Savings Plan), an expansion of sectoral/community-based initiatives and increased opportunities for educational leave. Labour recommended that the government adopt a variant of the levy/grant scheme, essentially requiring firms to remit the difference between a certain percentage of payroll and expenditures actually incurred on approved training (i.e., publicly provided institutional training).⁽²²⁾

Prior to the 1993 federal election, the government announced its intention to encourage more ET through increased expenditures on the development of training consortiums

(21) These data do not include expenditures on apprenticeship training, estimated to be around \$225 million in 1992-93. The lion's share of this was funded via UI.

(22) The rationale for a tax scheme such as this is to address the problem of "poaching" as a recruiting practice by non-training firms. This problem stems from the inability of training firms to assign the costs of training. If employers are expected to bear some of the cost of general training, they must be able to pay workers less than the market wage following training, in order to realize a return on their investment. This is usually not possible, because once workers are trained they will leave a firm that pays less than the going wage. A levy/grant is intended raise the level of training investments by requiring non-training firms to subsidize training firms. Aside from the problem of determining the appropriate rate of tax and subsidy, these schemes are usually administratively costly and have been known to encourage resource misallocation and yield adverse redistributive effects: for a discussion with the United Kingdom's experience, see Employment and Immigration Canada, *Labour Market Development in the 1980s*, July 1981, p. 222-7.

in various industry sectors (an additional \$250 million over the next five years) and the development of tax incentives to help defray the cost of training workers to meet certain occupational standards.⁽²³⁾ While the new government remains committed to encouraging more ET, the status of these earlier initiatives remains uncertain. In the context of tax-based ET incentives, further study seems to be needed. "In order to design a fair system of incentives for training in the workplace, we need a more detailed understanding of the diverse ways in which firms in different sectors of the economy and firms of different sizes train their own employees."⁽²⁴⁾

CONCLUSION

According to the results of the 1991 National Training Survey, ET activities appear to be more common than previously thought; 70% of private sector firms provided 133.6 million hours of structured training to 36% of the private sector work force for an estimated cost of \$3.6 billion. As noted earlier, many factors, including, for example, uncertainty, imperfect capital markets, problems of assigning training costs and a myriad of training-related regulations, could contribute to underinvestment in enterprise-based training. In the belief that firms and workers are underinvesting in ET, and that government intervention in this area generates net benefits to society, a number of programs have been designed to overcome problems. For instance, Human Resource Planning, especially in the context of national sectoral initiatives, may serve to dampen the uncertainty associated with training investments (through the provision of information pertaining to future demand and so on), permit imperfectly assigned training costs to be distributed over a greater number of firms, and provide an opportunity to exploit any economies of scale in the provision of ET. To date, policies have largely tended to ignore the ill effects of institutional factors and of what could be the greatest potential problem of all, imperfect capital markets.

(23) Minister of Finance, "Economic and Fiscal Statement," 2 December 1992, p. 8.

(24) Liberal Party of Canada, *Creating Opportunity: The Liberal Plan for Canada*, Ottawa, 1993, p. 37.

Although information on ET activities in Canada is currently being collected relatively rapidly, we do not know if firms and workers are underinvesting in training and, if so, why. It is not sufficient to base policy decisions on relative ET expenditures or some other such measure. Despite this void in information, policy-makers in Canada seem convinced of the need for more government intervention in the market for ET.

BIBLIOGRAPHY

- Abt Associates of Canada. *Evaluation of the Skill Shortages Program*. Prepared for Employment and Immigration Canada. September 1991.
- Akyeampong, Earnest B. "Apprentices: Graduate and Drop-out Labour Market Performances." *Perspectives*, Statistics Canada, Spring 1991, p. 7-15.
- Becker, Gary S. *Human Capital: A Theoretical and Empirical Analysis With Special Reference to Education*. National Bureau of Economic Research, New York, 1975.
- Betcherman, Gordon. "Research Gaps Facing Training Policy-Makers." *Canadian Public Policy*, XIX:1, March 1993, p. 18-28.
- Betcherman, Gordon. "Are Canadian Firms Underinvesting in Training?" *Canadian Business Economics*, Vol. 1, Fall 1992, p. 25-33.
- Brown, Eleanor and Howard Kaufold. "Human Capital Accumulation and the Optimal Level of Unemployment Insurance Provision." *Journal of Labour Economics*, Vol. 6, No. 4, 1988, p. 493-514.
- Canadian Labour Market and Productivity Centre. *Report of the CLMPC Task Forces on the Labour Force Development Strategy*. Part VII (Human Resource Planning). March 1990, p. 242-271.
- Canadian Labour Market and Productivity Centre. *National Training Survey*. February 1993.
- Couillard, Robert. *The 1990 Adult Education and Training Survey*. Employment and Immigration Canada and Statistics Canada, 1993.
- Davies, James B. "Training and Skill Development." *Adapting to Change: Labour Market Adjustment in Canada*. W.C. Riddell (ed.). Toronto, University of Toronto Press, 1986, p. 163-219.

Economic Council of Canada. *Employment in the Service Economy*. Chapter 7, 1991, p. 111-136.

Ekos Research Associates Inc. *Skill Investment Program Evaluation: Final Report*. Prepared for Employment and Immigration Canada. 12 February 1992.

Employment and Immigration Canada. *Labour Market Development in the 1980s*. Minister of Supply and Services Canada, Ottawa, July 1981.

Gunderson, Morley and Craig Riddell. "Incentives for Undertaking On the Job Training." Prepared for the British Columbia Task Force on Education and Training. June 1990.

Kapsalis, Constantine. "Employee Training in Canada: Reassessing the Evidence." *Canadian Business Economics*. Summer 1993, p. 3-11.

OECD. *Employment Outlook*. July 1991, Chapter 5, p. 135-75.

OECD. *Industry Training in Australia, Sweden and the United States*. Paris, 1993.

Ontario Premier's Council. *People and Skills in the New Global Economy*. 1990.

Rechnitzer, Edith. *Human Resource Training and Development Survey Results, 1987*. Statistics Canada, Ottawa, 1990.

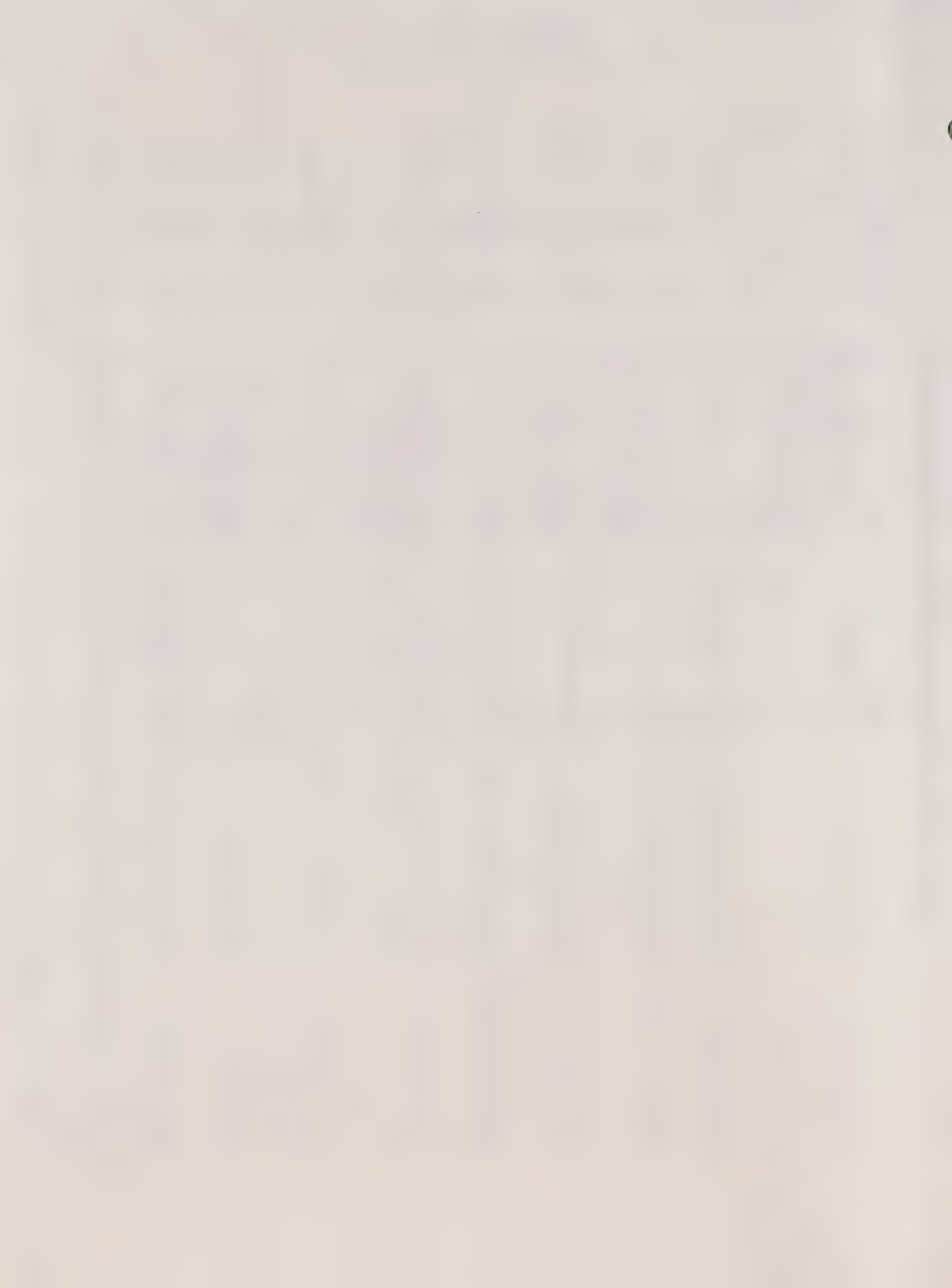
Simpson, Wayne and David Stambrook. "Employer-Based Training Policy in Canada." A paper based on research undertaken for Employment and Immigration Canada, draft, November 1989.

SELECTED SURVEYS OF EMPLOYER-SPONSORED TRAINING IN CANADA

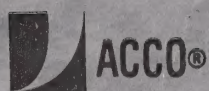
Sponsor	Sample	Focus	Summary of Results (1)	
Adult Education and Training Survey (1990)	Statistics Canada, Employment and Immigration Canada	92,808 individuals	Formal adult education activities including part-time courses, apprenticeship programs and employer-sponsored full-time programs.	13.0(E)
CLMPC High-Tech Survey (1987-89)	Canadian Labour Market and Productivity Centre	822 "high-tech" firms	Employer-sponsored formal training	47.0%(F)
CLMPC Training Survey (1987-89)	Canadian Labour Market and Productivity Centre	960 full-time employees	All formal and informal training for full-time employees over a two-year period	56.0(E)
Small Business Panel Survey (1988)	Canadian Federation of Independent Business	1,500 small firms	All employer-sponsored training (formal and informal training)	68.3(F)
Human Resource Training and Development Survey (1987)	Statistics Canada, Employment and Immigration Canada	7,321 firms	Employer-sponsored formal training	31.0(F)/27(E)
Adult Training Survey (1984-85)	Statistics Canada, Employment and Immigration Canada	93,000 individuals	Formal educational activity for employment-related purposes (only programs of more than four-weeks duration included)	11.3(E)
Survey of Training in Canadian Industries (1984-85)	Employment and Immigration Canada	7,652 establishments	Employer-sponsored formal training	25.2(F)/11.5(E)
Survey of Adult Education (1983)	Statistics Canada and Secretary of State	92,000 individuals	Employer-sponsored adult education (short-term training only)	6.2(E)
Survey of Skill Development Leave Programs (1982)	Skill Development Leave Task Force, Employment and Immigration Canada	340 firms (only firms with at least 100 employees)	Employer-sponsored leave for skill development	52.2(F)/18.1(E)

(1) These results pertain to the incidence of training (i.e. per cent of firms (F) providing and/or employees (E) receiving training). It should be noted that these results are not really comparable as the meaning of training, the populations from which the samples were drawn and the time periods covered vary considerably across survey.

Source: Economic Council of Canada, *Employment in the Service Economy*, 1991, Figures 7-1 and 7-10, p. 125-6; and Robert Couillard, *1990 Adult Education and Training Survey*, Employment and Immigration Canada and Statistic Canada, 1993.







ACCOPRESSTM MCM



YELLOW	25070	JAUNE
BLACK	25071	NOIR
BLUE	25072	BLEU
RL. BLUE	25073	RL. BLEU
GREY	25074	GRIS
GREEN	25075	VERT
RUST	25078	ROUILLE
EX RED	25079	ROUGE

ACCO CANADA INC.
WILLOWDALE, ONTARIO

* INDICATES
75% RECYCLED
25% POST-
CONSUMER FIBRE



*SIGNIFIE 75 %
FIBRES RECYCLÉES,
25 % DÉCHETS DE
CONSOMMATION

BALANCE OF PRODUCTS
25% RECYCLED

AUTRES PRODUITS:
25 % FIBRES RECYCLÉES

